

## ABSTRACT

A machinable light weight sisal-based concrete structural building material and a method of making the same are disclosed. The material includes short  
5 sisal fibers in a range from about 22% (v/v) to about 33% (v/v); a cement in a range from about 12% (v/v) to about 22% (v/v); and perlite in a range from about 51% (v/v) to about 59% (v/v). The method includes the steps of mixing an amount of cement with an amount of perlite to form a solid mixture; adding water and mixing water with the solid mixture to form a sludge; adding an amount of  
10 sisal fibers and mixing the sisal fibers into the sludge to form an uniform final composition; and pouring the final composition into a mold and setting the final composition to a solid form structural building material. The produced structural building material can be machined, screwed, cut, and nailed.

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